

i) The product itself, as described in amended claim 1, is a mixture of solids: the biocide (which is more than 80 wt% of the mixture) and inorganic components, which are biologically inactive. It is well understood by any skilled artisan that the mixture is entirely different in its physical nature from the multilayered capsules taught by Olson. In fact, the instant mixture is prepared by simply blending the components, granulating the blend on a two-roll compactor and pressing tablets (up to 3" in diameter) that are used as biocides in various applications.

ii) As supported in the specification (page 4), the major embodiment of the present invention is a novel approach for introduction of fire-retardancy into biocide application, whilst preserving the oxidizing activity of the biocide. It is respectfully noted that that coating or encapsulating the biocide, like in Olson, significantly decreases its oxidizing activity. Olson teaches of sustain release of the biocide from the capsules (please see Example II, Release Rates, columns 8-9). Further, Olson explicitly mentions that "encapsulated bleach may be released into the wash water slowly by allowing the coatings to dissolve and/or the bleach to leach through the coatings, or quickly by melting or crushing the coatings" (col. 8, lines 49-52).

Quite to the contrary, the biocide of the present invention is not encapsulated or coated, thus preserving its high oxidizing activity, and hence acts immediately after pouring the composition into water. However, the oxidation power of the biocide is reduced in the emergency situation during transportation and shipping (page 1, paragraph 3). It's needless to say that burying an oxidant under several layers of inorganic and organic materials is also cumbersome and expensive compared to convenient blending of the components as in the present invention.

iii) Olson suggests using organic materials, such as wax, which melt at very low temperatures (150-200 °F), below the melting temperatures of inorganic compounds, which are avoided in the instant product.

4. It is respectfully submitted that inorganic compounds, such as boric compounds and alkaline silicates, mixed with the biocide as described in the instant invention merely serve as flame retardants. They come into expression only in case of a conflagration of the store or the shipping unit of the bulk of tablets. Such conflagration regularly happens when the bulk of highly oxidizing compound, such as TCCA, is shipped or transported by trucks on the highways. It is well known that in such a case the biocide (in our case TCCA) can enhance the fire due to its strongly oxidizing character.

As we have already mentioned, and as described in the specification, the instant mixture was subjected to the intense heat of a propane burner flame, and it was unexpectedly found that it did not even melt, and no burning of tablets occurred. The reason for such flame retardation is that when ignited, the instant composition rapidly

turns to glass and hence deactivates the biocide by covering it. In other words, the composition of the present invention is unexpectedly and surprisingly self-protecting.

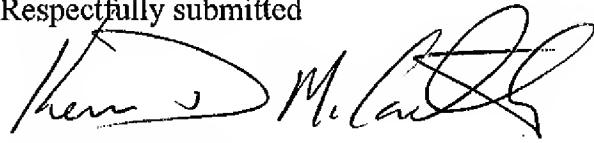
5. This is quite different compared to the teachings of Olson. In fact, an attempt of practicing Olson's invention by avoiding the multilayered coating and the encapsulation would definitely contradict Olson's teachings. No skilled artisan practicing Olson's invention would decide avoiding the encapsulation of the biocide with reasonable expectation of success. In this sense, and as noted above, Olson clearly teaches away from the present invention by suggesting to bury biocide in multiple layers of inorganic and organic materials, thus significantly reducing its biocidal activity during the intended use and complicating the manufacturing process. On the other hand, the Applicant surprisingly found that there is no need to encapsulate the biocide material in order to render it less combustible. The Applicant unexpectedly found that a simple admixture composed of biocides and low-melting inorganic compounds (which are less than 20 wt% of the mixture), forming a glass when heated, prevents conflagration of the biocides during their transportation.

We would like to stress out that solving the problem of conflagration of the biocides during their transportation has occupied minds of many artisans in the field, particularly after tragic episodes when trucks transporting combustibles were engulfed on the highways, the most dramatic episodes occurring in long tunnels. This problem has not been effectively solved until now. The unexpected finding of the Applicant is a long-felt need for solution of the aforementioned problem.

6. Finally, the Examiner notes that Olson and Jones both teach biocide compositions comprising oxidants. The Examiner alleges that "a reasonable expectation of success would have been expected by adding the constituents taught by Jones to the composition taught by Olson." However, this is true with respect to the encapsulated composition of Olson. As explained above, the instant composition is entirely different, and its flame-retarding properties are unpredictable based on teaching of Olson. Therefore, incorporating oxidants such as halogenated hydantoins, and flocculants such as aluminum sulfate, taught by Jones, into the multilayered encapsulated composition taught by Olson would definitely never result in the mixture of the present invention.

7. Thus, it is maintained that amended claim 1 and its dependent claims are inventive over the combined teachings of Olson and Jones. Accordingly it is respectfully solicited that the claims be allowed.

Respectfully submitted



Kevin D. McCarthy
Reg. No. 35,278

Roach, Brown, McCarthy & Gruber, P.C.
1920 Liberty Building - 424 Main Street
Buffalo, New York 14202